



#4

<110> DuPont Pharmaceuticals Company

<120> Peptidase-cleavable, targeted antineoplastic drugs and their therapeutic use

<130> PH-7134

<150> 60/189,387

<151> 2000-03-15

<160> 210

<170> PatentIn version 3.0

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09606637-062604







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102290-062601

[illegible]

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Figure 1 consists of 11 micrographs arranged in a vertical column, labeled 1 through 11. Each micrograph shows a different stage of chick embryo eye development. Micrograph 1 (1 day) shows a small, dark, circular spot. Micrograph 2 (2 days) shows a slightly larger, more defined spot. Micrograph 3 (3 days) shows a more complex, irregular shape. Micrograph 4 (4 days) shows a more defined, circular structure. Micrograph 5 (5 days) shows a more complex, irregular shape. Micrograph 6 (6 days) shows a more defined, circular structure. Micrograph 7 (7 days) shows a more complex, irregular shape. Micrograph 8 (8 days) shows a more defined, circular structure. Micrograph 9 (9 days) shows a more complex, irregular shape. Micrograph 10 (10 days) shows a more defined, circular structure. Micrograph 11 (11 days) shows a more complex, irregular shape.

Figure 1 consists of 11 micrographs arranged in a vertical column, labeled 1 through 11. Each micrograph shows a different stage of chick embryo eye development. Micrograph 1 (1 day) shows a small, dark, circular spot. Micrograph 2 (2 days) shows a slightly larger, more defined spot. Micrograph 3 (3 days) shows a more complex, irregular shape. Micrograph 4 (4 days) shows a more defined, circular structure. Micrograph 5 (5 days) shows a more complex, irregular shape. Micrograph 6 (6 days) shows a more defined, circular structure. Micrograph 7 (7 days) shows a more complex, irregular shape. Micrograph 8 (8 days) shows a more defined, circular structure. Micrograph 9 (9 days) shows a more complex, irregular shape. Micrograph 10 (10 days) shows a more defined, circular structure. Micrograph 11 (11 days) shows a more complex, irregular shape.



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<400> 29

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5

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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

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ordinarily skilled artisans

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109290-229990

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053000033-052604



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103390-253035

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<213> Artificial Sequence

<220>  
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<223> acetyl-glycine

<220>  
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<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 87

Xaa Pro Val Gly Leu Leu  
1 5

<210> 88  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 88

Xaa Pro Ile Gly Leu Leu  
1 5





<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 92

Xaa Pro Lys Gly Xaa Leu  
1 5

<210> 93

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-glycine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 93

Xaa Pro Leu Gly Leu Glu  
1 5

<210> 94

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-glycine

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> biphenylalanine

<220>

05605537-05605537

<221> PEPTIDE  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 94

Xaa Pro Leu Gly Xaa Glu  
1 5

<210> 95  
<211> 7  
<212> PRT  
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<220>  
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<223> N,N-dimethylglycine

<220>  
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<223> sarcosine (N-methylglycine)

<220>  
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<223> homophenylalanine

<220>  
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<400> 95

Xaa Pro Arg Xaa Xaa Arg Leu  
1 5

<210> 96  
<211> 7  
<212> PRT  
<213> Artificial Sequence

T03290-223035







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<400> 101

Xaa Leu Gly Xaa His Leu  
1 5

<210> 102

<211> 6

<212> PRT

<213> Artificial Sequence

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<223> acetyl-proline

<220>

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<223> homophenylalanine

<220>

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<222> (1)..(6)

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<400> 102

Xaa Leu Gly Xaa Ala Leu  
1 5

<210> 103

<211> 6

<212> PRT

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<222> (1)..(1)

<223> acetyl-proline

<220>

<221> MOD\_RES

<222> (4)..(4)

TEB290-060301





ordinarily skilled artisans

<400> 106

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 107

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> (O-(4-pyridylmethyl)-tyrosine)

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> homophenylalanine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 107

Xaa Leu Gly Xaa Xaa Leu  
1 5

<210> 108

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

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<222> (1)..(1)

09606637-064604

<223> acetyl-proline

<220>

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<222> (4)..(4)

<223> homo-tyrosine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 108

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 109

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

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<220>

<221> MOD\_RES

<222> (4)..(4)

<223> 4-aza-homophenylalanine

<220>

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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 109

Xaa Leu Gly Xaa Tyr Leu  
1 5

109590-269955



ordinarily skilled artisans

<400> 111

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 112

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> styryl-alanine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 112

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 113

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline

<220>

<221> MOD\_RES

<222> (4)..(4)

10330-2590950

<223> O-benzyl-serine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 113

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 114

<211> 6

<212> PRT

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<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline

<220>

<221> MOD\_RES

<222> (2)..(2)

<223> N,N-dimethyl-lysine

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> homophenylalanine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 114

Xaa Xaa Gly Xaa Tyr Leu  
1 5

05606637-0570601











<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
<221> MOD\_RES  
<222> (3)..(3)  
<223> ornithine

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> homophenylalanine

<220>  
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<222> (1)..(7)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 122

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1 5

<210> 123  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
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<222> (1)..(1)  
<223> acetyl-proline

<220>  
<221> MOD\_RES  
<222> (2)..(2)  
<223> ornithine

<220>

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<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 123

Xaa Xaa Gly Leu Tyr Leu  
1 5

<210> 124  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
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<223> 4-aza-phenylalanine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 124

Xaa Xaa Gly Leu Tyr Leu  
1 5

<210> 125  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> acetyl-proline

123456789101112131415161718192021222324252627282930313233343536373839404142434445464748495051525354555657585960616263646566676869707172737475767778798081828384858687888990919293949596979899100

<220>  
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<223> homophenylalanine

<220>  
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<223> 2,4-diaminobutanoic acid

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 125

Xaa Leu Gly Xaa Xaa Leu  
1 5

<210> 126  
<211> 6  
<212> PRT  
<213> Artificial Sequence

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<223> acetyl-proline

<220>  
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<222> (4)..(4)  
<223> homophenylalanine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 126

Xaa Leu Gly Xaa Lys Leu  
1 5

<210> 127  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
<221> MOD\_RES  
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<223> N,N-dimethyl-lysine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 127

Xaa Leu Gly Xaa Xaa Leu  
1 5

<210> 128  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> N,N-dimethylglycine

<220>

0950553.062361  
"2E999999"



Figure 1 illustrates the steps of the proposed algorithm for finding a minimum spanning tree. The process starts with a graph with 10 nodes and 15 edges. The algorithm iteratively selects edges with the minimum weight that do not create a cycle or result in a vertex with a degree greater than 2. The steps are as follows:

- (a) Initial graph with 10 nodes and 15 edges.
- (b) Select edge (1,2) with weight 1.
- (c) Select edge (2,3) with weight 1.
- (d) Select edge (3,4) with weight 1.
- (e) Select edge (4,5) with weight 1.
- (f) Select edge (5,6) with weight 1.
- (g) Select edge (6,7) with weight 1.
- (h) Select edge (7,8) with weight 1.
- (i) Select edge (8,9) with weight 1.
- (j) Select edge (9,10) with weight 1.
- (k) Select edge (1,3) with weight 2.
- (l) Final minimum spanning tree with 9 edges and total weight 9.

Xaa Leu Gly Xaa Xaa Leu  
1 5

```
<220>
<221> MOD_RES
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<223> acetyl-gamma-glutamic acid
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<220>
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<222> (6)..(6)
<223> N,N-dimethyl-lysine
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<400> 130

Xaa Pro Leu Gly Xaa Xaa Leu  
1 5

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<220>
<221> MOD_RES
<222> (1) .. (1)
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<223> homophenylalanine

<223> N,N-dimethyl-lysine

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

Xaa Pro Leu Gly Xaa Xaa Leu  
1 5

<213> Artificial Sequence

<223> acetyl-proline

<223> homophenylalanine

<223> N,N-dimethyl-lysine

 $\langle 220 \rangle$





<223> acetyl-gamma-glutamic acid

<220>

<221> MOD\_RES

<222> (5)..(5)

<223> homophenylalanine

<220>

<221> MOD\_RES

<222> (6)..(6)

<223> N5-aminocarbonylornithine

<220>

<221> PEPTIDE

<222> (1)..(7)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 135

Xaa Pro Leu Gly Xaa Xaa Leu  
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<210> 136

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> homophenylalanine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

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<400> 136

Xaa Leu Gly Xaa Gln Leu  
1 5

<210> 137

<211> 6

<212> PRT

<213> Artificial Sequence

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<223> acetyl-proline

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> homophenylalanine

<220>

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<223> 4-aza-phenylalanine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 137

Xaa Leu Gly Xaa Xaa Leu  
1 5

<210> 138

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline



<212> PRT  
<213> Artificial Sequence

<220>  
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<223> acetyl-glycine

<220>  
<221> MOD\_RES  
<222> (2)..(2)  
<223> 2-carboxyazetidine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 140

Xaa Xaa Leu Gly Leu Leu  
1 5

<210> 141  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
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<222> (1)..(1)  
<223> acetyl-(4-fluoro-phenylalanine)

<220>  
<221> PEPTIDE  
<222> (1)..(5)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 141

Xaa Leu Gly Leu Leu  
1 5

0560337-057601

<210> 142  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
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<222> (1)..(1)  
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<220>  
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<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 142

Xaa Leu Gly Leu Tyr Leu  
1 5

<210> 143  
<211> 6  
<212> PRT  
<213> Artificial Sequence

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<220>  
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<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> ornithine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to

1030390-2199090

ordinarily skilled artisans

<400> 143

Xaa Leu Gly Xaa Xaa Leu

1 5

<210> 144

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-2-carboxyazetidine

<220>

<221> PEPTIDE

<222> (1)..(6)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 144

Xaa Leu Gly Leu Tyr Leu

1 5

<210> 145

<211> 6

<212> PRT

<213> Artificial Sequence

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<223> acetyl-2-carboxyazetidine

<220>

<221> MOD\_RES

<222> (4)..(4)

<223> homophenylalanine

<220>

<221> MOD\_RES

<222> (5)..(5)



<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
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<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 147

Xaa Leu Gly Xaa Tyr Gly  
1 5

<210> 148  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
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<222> (1)..(1)  
<223> acetyl-proline

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> beta-homo-leucine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 148

Xaa Leu Gly Leu Tyr Xaa  
1 5

<210> 149  
<211> 6  
<212> PRT  
<213> Artificial Sequence

148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000





<221> MOD\_RES  
<222> (6)..(6)  
<223> 4-amino-5-phenylpentanoic acid

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 152

Xaa Leu Gly Leu Tyr Xaa  
1 5

<210> 153  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> acetyl-proline

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> 4-amino-7-methylheptanoic acid

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 153

Xaa Leu Gly Leu Tyr Xaa  
1 5

<210> 154  
<211> 7  
<212> PRT  
<213> Artificial Sequence

0660333-062604



<223> acetyl-glycine

<220>

<221> PEPTIDE

<222> (1)..(7)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 156

Xaa Pro Leu Gly Leu Ala Leu  
1 5

<210> 157

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline

<220>

<221> PEPTIDE

<222> (1)..(7)

<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 157

Xaa Leu Gly Leu Ala Ala Leu  
1 5

<210> 158

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD\_RES

<222> (1)..(1)

<223> acetyl-proline

<220>

156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000

<221> PEPTIDE  
<222> (1)..(7)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 158

Xaa Leu Gly Leu Ala Leu Leu  
1 5

<210> 159  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> acetyl-proline

<220>  
<221> PEPTIDE  
<222> (1)..(7)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 159

Xaa Leu Gly Leu Leu Ser Leu  
1 5

<210> 160  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> acetyl-proline

<220>  
<221> PEPTIDE  
<222> (1)..(7)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to

158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000







<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> tetrazoleacetyl-proline

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 166

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 167  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> tetrazoleacetyl-proline

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> O-benzyl-serine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 167

166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000



<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 169

Pro Leu Gly Xaa Tyr Leu  
1 5

<210> 170  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
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<223> acetyl-proline

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
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<223> homo-tyrosine

<220>  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 170

Xaa Leu Gly Xaa Xaa Leu  
1 5

<210> 171  
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<213> Artificial Sequence

TOP SECRET - CONFIDENTIAL



<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 172

Xaa Leu Gly Xaa Tyr Leu  
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<210> 173  
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<212> PRT  
<213> Artificial Sequence

<220>  
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<223> acetyl-proline

<220>  
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<223> 4-nitro-homophenylalanine

<220>  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 173

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 174  
<211> 6  
<212> PRT  
<213> Artificial Sequence

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<223> acetyl-proline

<220>

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<221> MOD\_RES  
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<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> 4-aza-hydroxy-phenylalanine

<220>  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 174

Xaa Leu Gly Xaa Xaa Leu  
1 5

<210> 175  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> acetyl-proline

<220>  
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<223> O-methyl-serine

<220>  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 175

Xaa Leu Gly Xaa Tyr Leu

174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000









<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> acetyl-proline

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homo-phenylalanine

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> homo-leucine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 182

Xaa Leu Gly Xaa Tyr Xaa  
1 5

<210> 183  
<211> 6  
<212> PRT  
<213> Artificial Sequence

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<223> acetyl-proline

<220>  
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<222> (4)..(4)  
<223> O-benzyl-threonine

<220>

182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000

<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 183

Xaa Leu Gly Xaa Tyr Leu  
1 5

<210> 184  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (1)..(1)  
<223> acetyl-gamma-glutamic acid

<220>  
<221> MOD\_RES  
<222> (5)..(5)  
<223> homophenylalanine

<220>  
<221> MOD\_RES  
<222> (7)..(7)  
<223> norleucine

<220>  
<221> PEPTIDE  
<222> (1)..(7)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 184

Xaa Pro Leu Gly Xaa Tyr Xaa  
1 5

<210> 185  
<211> 7  
<212> PRT  
<213> Artificial Sequence

184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000





<221> MOD\_RES  
<222> (4)..(4)  
<223> O-benzyl-serine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 188

Pro Leu Gly Xaa Tyr Leu  
1 5

<210> 189  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> O-methyl-serine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 189

Pro Leu Gly Xaa Tyr Leu  
1 5

<210> 190  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> 4-aza-hydroxy-phenylalanine

0960031-062601

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 190

Pro Leu Gly Xaa Tyr Leu  
1 5

<210> 191  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 191

Pro Leu Gly Xaa Tyr Leu  
1 5

<210> 192  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
<221> PEPTIDE  
<222> (1)..(6)

190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000



<221> MOD\_RES  
<222> (6)..(6)  
<223> norleucine

<220>  
<221> PEPTIDE  
<222> (1)..(6)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 194

Pro Leu Gly Xaa Tyr Xaa  
1 5

<210> 195  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> 4-aza-hydroxy-phenylalanine

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> norleucine

<220>  
<221> PEPTIDE  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 195

Pro Leu Gly Xaa Tyr Xaa  
1 5

<210> 196  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> norleucine

<220>  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 196

Pro Leu Gly Xaa Tyr Xaa  
1 5

<210> 197  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (4)..(4)  
<223> homophenylalanine

<220>  
<221> MOD\_RES  
<222> (6)..(6)  
<223> norleucine

<220>  
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<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 197

10990933062001







<212> PRT  
<213> Artificial Sequence

<220>  
<221> PEPTIDE  
<222> (1)..(4)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 203

Pro Leu Gly Leu  
1

<210> 204  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> PEPTIDE  
<222> (1)..(7)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 204

Pro Leu Gly Leu Leu Tyr Leu  
1 5

<210> 205  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> PEPTIDE  
<222> (1)..(5)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 205

Gly Pro Leu Gly Leu  
1 5

109606637-062601

<210> 206  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> PEPTIDE  
<222> (1)..(5)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 206

Asp Pro Leu Gly Leu  
1 5

<210> 207  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> PEPTIDE  
<222> (1)..(5)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 207

Pro Glu Gln Gly Leu  
1 5

<210> 208  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> PEPTIDE  
<222> (1)..(4)  
<223> The synthesis of this peptide may be performed on an ABI 433A peptide synthesizer using readily available materials well known to ordinarily skilled artisans

<400> 208

Pro Gln Gly Leu

